

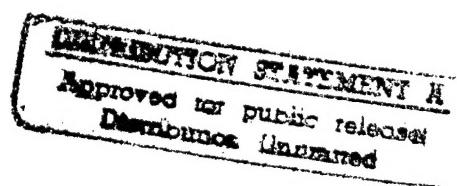
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**Statement of**  
**The Under Secretary of Defense for Acquisition and Technology**  
**Paul G. Kaminski**

**Before the  
National Security Subcommittee  
of the House Committee on Appropriations**

**on**  
**Bomber Modernization**

**May 17, 1995**

Mr. Chairman, members of the subcommittee, and staff, thank you for the opportunity to appear before you today to discuss the specifics of the Department's bomber modernization strategy. My first involvement with long range bomber force issues dates back to 1977 when I worked as special assistant to then Under Secretary of Defense William Perry. I was involved in establishing the framework for the stealth programs, to include what eventually became the F-117 and the B-2. In 1981, I was reassigned to be director of low observables technology, at which time the F-117 was entering production, and source selection for the B-2 was being completed. For me, Mr. Chairman, heavy bomber studies, employment of stealth technology and the B-2 bomber are familiar landmarks along a path I first traveled down nearly 17 years ago.

Our heavy bomber force, composed of the B-52H, B-1B, and B-2 bombers, is a very important element of America's total military power. Used in conjunction with other formidable elements of military force, or alone in some cases, our heavy bombers can project America's presence around the world in peacetime and project responsive force in times of armed conflict.

For the last 50 years, US bomber aircraft were acquired and equipped primarily to perform the long-range, penetrating mission in response to all-out nuclear war. For many of those years heavy bombers provided the manned portion of the well known and successful triad deterrent concept. The postulated threat of that time, the former Soviet Union, possessed awesome military defenses that required an incessant drive to develop and quickly field the latest offensive and defensive systems. Because of the importance and seriousness of the nuclear mission, and the lower probability of a conventional conflict, our bombers were provided with the capability to perform the conventional warfare mission as a secondary role. However, the world has dramatically changed in recent years and we believe that we are now more likely to use our heavy bombers in a conventional conflict in some region of the world far from our shores, facing a well armed, but somewhat less formidable foe than our previous adversary.

Our heavy bombers possess the characteristics of speed, long-range, and large payloads which are well suited to provide an immediate response to hostile action by some ill-meaning despot. Therefore, in recent years we have re-directed our bomber programs to reflect a higher conventional requirement and devised upgrade programs to maximize our previous investments, comply with treaty requirements, and yet, still retain the capability to respond to a nuclear attack if needed. Based upon intelligence community projections, our planning for future conflict situations has included the stressing scenario in which one adversary chooses to invade the sovereign territory of one of our allies, and some short time later a second adversary chooses to attack a second ally in another region of the world. That case was cited and supported in the FY 1996-2001 Defense Planning Guidance, and named therein as the two nearly-simultaneous major regional contingencies scenario.

To provide a framework for assessment, we requested the acquisition and operational communities of the Joint Staff and the Services to define our existing and

planned bomber force conventional capabilities, and what would be the best use of those capabilities should we find ourselves involved in a future conflict scenario involving two nearly-simultaneous major regional contingencies. We challenged the intelligence community to project what capabilities our most likely adversaries would possess in future years of 1998, 2006, and 2014. Based upon all that information, we have analyzed the capability of our planned bomber force to meet the national security requirements of fighting two nearly-simultaneous major regional conflicts. Because we know our ability to accurately project the future is less than perfect, we also analyzed alternatives to our planned bomber force, and evaluated numerous excursions to changes in warning times, threat, force arrival projections, weapons inventories, weapons effectiveness, and various other key parameters.

#### **FY 1995 HEAVY BOMBER FORCE STUDY**

The analysis I am referring to is known as the FY 1995 Heavy Bomber Force Study. I would like to provide you with a summary of the results of this major analytical work. I believe this is the most significant and comprehensive study to date that considered the use of all three heavy bombers in the conventional warfighting role in conjunction with other United States and Allied ground, naval, and air forces. I believe that an accurate summary can be presented in unclassified form, but the details of the study must remain classified and be protected because the data used in the conduct of the study was obtained from actual war planning documents. Only in a classified forum can I adequately convey the full scope, magnitude, and significance of this study. I believe the FY 95 Heavy Bomber Force Study will become the intellectual cornerstone for building our bomber forces for the next century.

Charts 1 through 22 convey the results of the study. Chart 2 summarizes the congressional direction. Language contained in both the FY 95 Authorization Act and in the Appropriations Act requested the Department to analyze bomber program costs

and requirements for the scenario of two nearly-simultaneous major regional contingencies in the years 1998, 2006, and 2014.

In response to these requests, the Department initiated an FY 1995 Heavy Bomber Study plan composed of three separate sub-studies as depicted in the logic flow diagram on chart 3. Let me, at this point, give you a four-point bottom line:

- First, we have completed the first sub-study, the bomber requirements study. The results of that study do not make the case for buying additional B-2s.
- Second, this is the most comprehensive study of bomber force structure that I have ever been associated with in about 17 years of working in this arena. Chart 4 identifies the members of the executive committee who guided this effort. The study included all the relevant forces that would be involved in a future two major regional contingency (2MRC) scenario; and all the planning assumptions that the Department uses to size the Bottom-Up Review forces and that the Department is currently using in defense planning guidance. These are the same underpinnings as we have used to size the rest of the Department's force structure and programs.
- Third, our study shows the overwhelming importance that tactical air forces play in this 2MRC scenario; and the fact that one can not ignore the impact of tactical air forces in making bomber force structure decisions as have many other studies in the past. The key point to be made here is being sure that one has tested the major assumptions and the uncertainties associated with employment of tactical airpower. This includes where and how tactical air (TACAIR) arrives, how fast it arrives, and the potential for constraints on TACAIR bases. We've worked in earnest to illuminate those issues.

- Fourth, the study shows that additional value is provided by more B-2s. But what it also illuminates is the much greater cost effectiveness that can be derived from procuring greater quantities of advanced accurate guided weapons to leverage not only the bombers, but the rest of our tactical forces. Additionally, bomber conventional upgrades that we looked at in the study are clearly cost-effective and necessary.

I will go through these conclusions in some detail to support the underlying points. As a consequence, we are not recommending buying additional bomber capability and are now on the path labeled "No" on the chart 3 logic diagram. We still have one more piece of this overall effort to complete, because as I indicated earlier, with the decision "No", we do need to complete a Bomber Industrial Base Study. That effort is already in progress and we expect to complete that effort in early July 1995. Following the completion of this sub-study, we can then decide what we need to do with our underlying industrial base if we're not buying additional B-2s. For example, what specific industrial capabilities need to be preserved?

As shown in chart 5, I will present the results of the bomber requirements study in three parts. The first part is what I call "No strike TACAIR." This is a very extreme excursion case, but it was one that we used to relate the results of this study with the other bomber studies that did not include the use of tactical air forces. The next two parts of the results presentation are really the heart of what we did. Part two examines the baseline case of a two MRC scenario with all of our planning factors and all of our planned forces included in the campaign. Then part three addresses all the sensitivity excursions. It examines variations in assumptions and planning factors that one would want to undertake to be prudent in looking at hedge positions, and exploring alternatives to be looked at. In parts two and three together, we examined what I believe to be a full spectrum of engagement conditions.

Most of the results presented in this statement will be for the year 2014, the most interesting case. We obtained similar results in other years (1998, 2006), but the effect of 20 additional B-2 is greatest in this year because of the fact that they all in the force by this time. Our estimated useful life for the B-52H aircraft goes through the year 2030. The long service life of the B-52H aircraft is attributed to the just recently completed engine replacement program and the projected use of the airframe in a relatively benign, medium-to-high altitude flight regime.

### **NO STRIKE TACAIR CASES**

We looked at two major regional contingencies, designated "East" and "West," in which strike tactical air forces were arbitrarily constrained to be not available for employment during the first 15 days of each contingency. There could be a variety of reasons, or combinations of events, that could preclude use of strike tactical aircraft. For example, there could be continuing enemy attacks on our airfields; no carrier aircraft available; or basing restrictions for political reasons. In this extreme case, the strike assets available to us are only the long range bombers during the initial 15 days of the war in each contingency. We are getting a little bit of air superiority support, but no strike missions from tactical air forces.

Chart 6 presents the results of this "No Strike TACAIR" case. This chart depicts the normalized maximum extent of enemy penetration into allied territory during the initial "halting" phase of the "East" and "West" major regional contingencies. The actual movement of the forward line of troops is classified, so I have displayed a normalizing yardstick to be able to give you a basis for comparison. The normalizing benchmark number on this yardstick is 100, in the sense that 100 percent represents the maximum penetration into allied lines during the baseline case in which tactical air forces are present during the opening phase of each contingency.

In chart 6, the first solid bar represents this baseline case for each of the two contingencies. With our planned bomber force only, including all 20 B-2s, the next striped bar indicates that we lost 50 and 80 percent more territory in the opening phase of "East" and "West" contingencies respectively. After the first 15 days, tactical aircraft were gradually inserted into the strike order of battle. We then added 20 more B-2s to the planned bomber force and ran the "No Strike TACAIR" scenario again. This time, the amount of territory lost was down to about 40 and 70 percent more than that lost during the baseline case. We re-ran this case with 40 more and 60 more B-2 bombers as well. In each case, we lost slightly less territory during the halting phase of each major regional contingency.

When one looks at the "East" MRC, you can see that it takes a little more than 60 additional B-2s to hold the line of troop movement to near what we had when we used tactical air and bombers together in the baseline case. I must be careful here to note that the additional bombers would not be a complete substitute for the strike tactical aircraft because those tactical aircraft are used to prosecute the war to conclusion, including offensive operations, following the 15 day restriction. However, one can conclude that additional bombers do provide an important hedge against additional territorial losses should tactical aircraft not be available, for whatever the reason, during the early days of a conflict. In this study, we looked at other excursions that restricted the use of tactical aircraft for shorter periods of time and different rates of arrival in theater.

There are three overall observations, listed on Chart 7, that I would make from the "No Strike TACAIR" cases. The first is that one can not ignore the contribution of tactical air forces in an MRC. The second is that up to 60 more B-2s would not fully compensate for an 8-15 day denial of strike tactical air capability. And third, additional B-2s certainly helped to mitigate the absence of strike tactical aircraft. This result is similar to the results of other bomber studies that have been done without including planned tactical air forces. One can observe that we are moving back in the right

direction and reducing the movement of the forward line of troops. But one needs a significant number of bombers to make up this difference. Not shown on the chart is the fact that we would need significant increases in accurate munitions if we used additional bombers to do this job, and those bombers have to be forward based to allow sufficient number of sorties.

### **BASELINE CASE**

Mr. Chairman, I would like now to present the results of the baseline case (see chart 8): two major regional contingencies using the Department's planned bomber force and tactical air forces, along with the planning factors that go with them. This case, along with many excursion cases, were evaluated by the Institute for Defense Analyses (IDA) using the campaign analysis methodology depicted in chart 9.

The major inputs to the campaign level models used by IDA were the projected threat, the planned forces and the planning scenario provided by the Department of Defense. The threat, in the form of air defenses and ground forces, was derived from estimates made by the Defense Intelligence Agency (DIA) and the national security intelligence community and then confirmed by the national intelligence officer for general purpose forces. The forces used were those in the Department's Future Years Defense Program (FYDP) and Defense Planning Program (DPP). These forces were confirmed and reviewed by the executive committee, identified earlier in chart 4, and composed of senior representatives of the Services, Joint Staff, and the Office of the Secretary of Defense (OSD). The two near-simultaneous MRC scenario was based upon the planning factors consistent with those used by the Department to establish the Bottom-Up Review force structure. It reflects the current planning guidance for the Department's future budget activity.

IDA used three different campaign models to perform the analysis: the IDA Bomber Force Model, TACWAR and THUNDER. Each model possessed a high amount of fidelity in one or more areas. For example, the IDA Bomber Force Model makes use of linear programming techniques to optimize the assignments of aircraft and weapons to targets in order to minimize losses. TACWAR is a campaign level model used by the Army, the Joint Staff, and a wide variety of planners within the defense community. It is a deterministic model with unique strengths in simulating ground warfare outcomes. THUNDER, a model developed by the Air Force, uses stochastic techniques to model the scenario and assess air campaigns. The IDA study team emphasized the strengths of each model and looked for consistency of the output results. This procedure mitigated the possibility of obtaining results biased by the characteristic of a particular model. Many other bomber studies tend to rely on only one type of model.

These models are tremendously large and require the input of many tens of thousands of input variables--forces, capabilities, weather, terrain, threats, tactics, weapons effectiveness, and the like. In turn, these models produce results in the form of a number of outcome measures. During the course of the study, we examined those outcome measures and further evaluated those that influence the overall campaign outcome. Today, I will present results in terms of three outcome measures. The first one is the movement of the forward line of troops. I showed you that measure earlier in chart 6 during my discussion of the "No Strike TACAIR" cases. The next is the total number of aircraft lost during the individual combat missions of both MRCs. The third outcome measure is how many sorties were required to successfully complete the campaign.

This was the study approach to assess bomber force requirements. As I testified earlier, this is the most comprehensive study, that I personally have been involved with--about 12 man-years have gone into this IDA effort since November of last year.

As a part of this effort, IDA performed a systematic analysis of 18 other related studies that have been published on this subject. This analysis provided useful insights into the robustness of the assumptions, conclusions, and recommendations of this and the other studies.

Chart 10 illustrates the range of bomber force structure options evaluated during this study for the year 2014. The effectiveness of each of these bomber force options was evaluated at the three different years specified in the Congressional language: 1998, 2006 and 2014. These years, although mandated, were reasonable choices for evaluating near-, mid- and long-term bomber force effectiveness. The force composition varies a slight amount over time as new bombers are built and introduced. By 2014, the options containing 20 more B-2s have reached full operational force levels.

The first option is the planned total force of 181 bombers. The second option retires the B-1s from the planned force. To compensate some for loss of capability, this option also adds 28 B-52s for a total force of 114 bombers. This is a lower cost option than our planned force because the money saved from retiring 95 B-1s is considerably greater than what we would spend to restore 28 B-52s. The third option is a near constant life cycle cost case where the B-1s are retired to buy 20 more B-2s. The fourth option is the most expensive. This option adds 20 more B-2s to the planned force.

One of the key scenario planning factors was the arrival of bomber and tactical aircraft at forward bases. Chart 11 depicts the time phased arrival of bombers and tactical aircraft into each of the two MRCs. Although the heavy bombers carry a larger weapons load, this chart clearly illustrates my earlier point about how the employment of tactical aircraft dominates the US/allied air-to-ground strike campaign.

Chart 12 provides a comprehensive summary of the life cycle costs associated with procuring and operating an additional 20 B-2 aircraft. It starts with the recurring

flyaway cost of each B-2 aircraft. And then, certain non-recurring costs like facilities and warranties are added to yield aircraft flyaway cost. Next, weapon system cost is determined by including technical data and training equipment to the cost estimate. Procurement cost brings initial and mission readiness spares into the estimate. Program acquisition cost adds and amortizes the development costs. Finally, life cycle costs include the support costs associated with operating the 20 additional B-2s over a period of 25 years.

During this study, all cost comparisons were made in terms of constant FY96 dollars--a standard practice for making investment decisions. If we took the IDA 25-year life cycle cost estimate of \$24.5 billion and converted it to then-year dollars, this amount would inflate to \$32.5 billion for 20 more B-2s. Chart 13 presents constant FY96 dollar comparisons of the recurring flyaway and life cycle cost estimates made by IDA, the OSD Cost Analysis Improvement Group (CAIG), the Air Force, and Northrop for 20 additional B-2 bombers. This chart shows, not surprisingly, that different costing groups sometimes get different results. The IDA estimate compares well with the two government estimates. There is a difference with the Northrop estimate. The difference is attributed to a number of items that are not included by Northrop, but were included in the government estimates such warranties, sustaining engineering, engineering change orders, and mission readiness spares. There was also a difference in learning curve projections for production of aircraft.

Chart 14 presents some normalized results for the baseline case. Three different measures of effectiveness (MOEs) are shown in this chart--forward line of troops movement, aircraft lost and sorties required. Each measure is the aggregate total associated with the campaign in both MRCs. Again, the results are normalized on the basis of 100 for the planned force to make the results presentable in an unclassified forum.

The first MOE, forward line of troops (FLOT) movement, portrays the maximum depth of penetration by enemy forces into allied lines. One wants a small depth of penetration. So a shorter bar is better on this chart. In this comparison, the results obtained with the planned bomber force are compared to the case where 20 more B-2s are added to the planned force. The resulting difference in FLOT movement is small and difficult to discriminate for both the "East" and "West" MRCs. In terms of this measure, the change in the size of the bomber force represented by 20 additional B-2s just does not change FLOT movement in a significant way when all the other ground and tactical air forces are also at play in the scenario.

The next measure of effectiveness is total number of bomber and tactical aircraft lost during the campaign, or attrition. This is an important measure because as attrition increases you have less resources to use against the enemy and the conflict will become more costly and prolonged. In chart 14, a shorter bar means a smaller number of losses. In comparison to the planned force, a force with 20 additional B-2s lost 6 percent fewer aircraft.

The third important measure presented in chart 14 is the number of sorties required to complete the two MRC campaign. This is a measure of efficiency and depends not only upon the platform used, but the weapon employed against the target. When compared to the planned force, a total force with 20 more B-2s required 4 percent fewer sorties. Again, this is a slightly better result.

The differences are small because the bomber force changes are small when compared to the total number of tactical aircraft available to strike enemy targets. The available number of combat aircraft includes: all the allied aircraft that are already in the theater, US aircraft that were already in the theater at day one, plus the US tactical aircraft that are deployed to the theater. In excursions where the number of strike missions flown by tactical aircraft are restricted, particularly in the early phases of the

conflict, some discrimination begins to appear with the addition of 20 more B-2 bombers to the planned force. However, it comes down to the point I made earlier: tactical air forces have a big impact on the campaign outcomes. If one examines these results in detail, bombers are far more important during the early halt phase as tactical air forces are arriving. Once all the tactical air forces are in place and fully employed--the bomber contribution shrinks to a small portion of the overall aggregate force.

The relative cost-effectiveness of the bomber force options were evaluated by combining the life cycle cost estimates with the measures of effectiveness results. Chart 15 plots the normalized number of aircraft lost as a function of change in bomber force cost. Again, to keep the results unclassified, the number of aircraft lost is set to 100 for the planned force option. Cost changes are expressed relative to the planned force option as well. On this chart, movement towards the upper left hand quadrant coincides with fewer aircraft losses and less cost--a more cost effective result.

It is important to emphasize that every one of the bomber force options on chart 15 satisfied the requirements of the two MRC scenario--every enemy target was serviced with a prescribed level of damage. Since each of the bomber force options were sufficient to meet mission needs, cost-effectiveness becomes the primary factor in selecting the best value bomber force option.

An examination of the relative cost-effectiveness of the 20 more B-2s option reveals that the cost increase by \$24.8 billion and 6 percent fewer aircraft were lost. On the other end of the cost spectrum, one could retire all 94 B-1s and restore 28 B-52Hs at a savings of \$20 billion--the requirements of the two MRC scenario are still met--but 18 percent more aircraft are lost during the course of the two MRC campaign.

The option that retires the 94 B-1s, restores 28 B-52Hs and uses the savings to buy 20 more B-2s provides an opportunity to make an objective statement of cost-

effectiveness. This option, relative to the planned force, costs more and ends up with a greater number of aircraft losses. This is clearly an option one wants to remove from further consideration. In addition, this example examines the results in 2014. This option is also less attractive from an implementation viewpoint: 94 B-1s would be retired in the near term--along with an attendant loss of combat capability--while 20 B-2s are added to the inventory over 20 years.

### SENSITIVITY EXCURSIONS

Excursions to the baseline case were run to examine reasonable variations in our predictions of the threat, availability of tactical air forces, and in the effectiveness of weapons (see chart 16). The full spectrum of underlying engagement conditions shown in chart 17--including weather, threat level, warning time, use of special operations forces, chemical attacks on tactical aircraft bases, and several others--were examined during this portion of the study. These cases tested the sensitivity of our assumptions and helped us get to the basis of another important issue. Do we need bombers at all?

Chart 18 depicts the results with respect to the inventory of advanced accurate guided weapons. Once again I am using a normalizing yardstick where 100 is the planned weapons inventory case. Using this planned inventory of weapons, we set the number of aircraft lost to 100 percent. This chart shows a nearly 60 percent increase in the number of aircraft lost during the campaign for a 25 percent reduction in planned weapons inventory levels. If, on the other hand, we double the planned inventory of advanced accurate weapons, the number of aircraft lost falls to a level that is a little less than 40 percent of the planned inventory case. The quantity of accurate guided weapons inventories have a dramatic impact on the outcome of the scenario. This is not surprising, because the weapons are not only leveraging the bombers, they are leveraging all the tactical aircraft as well.

There are weapons that can be used on ships or fired by land. We, for example, have a few thousand Tomahawks in the planned force and those are used in the baseline case. We also have missiles that are operated by the Army, including the MLRS and ATACMS systems. All of these systems were used in the baseline assessment. The results of this weapons excursion were based upon changes in the number of air-delivered weapons only.

Chart 19 conveys the relative cost effectiveness of doubling the buy of advanced accurate munitions and the B-1 Conventional Munitions Upgrade Program (CMUP). A two-fold increase in the current weapon inventory objective will cost approximately \$13 billion. For this investment, there is between a 50 and 80 percent reduction in the number of aircraft lost from the baseline program case. The relative slope of the weapons excursion case on chart 19 clearly show a much greater reduction in aircraft losses per dollar spent than we obtain buying additional B-2s. I can now make an objective judgment that buying more weapons is more cost effective than buying 20 additional B-2s.

I would also note that relative to other studies, our overall assumption was reasonably conservative about weapons effectiveness. For this reason, we performed excursions with more and less effectiveness than our conservative estimate. This additional excursion in effectiveness accounts for the "fan" plotted in chart 19. This sensitivity is so high that it turns out to be one of the most important outcomes in the study. We plan to more carefully investigate the weapons composition rather than simply doubling the current inventory.

Chart 19 illustrates the answer to another issue: the relative cost effectiveness of the decision to proceed with the B-1 conventional mission upgrade program. This program is well defined and costs about \$3.7 billion, which is approved and programmed in our planning and budget documents. It is part of the planned force. So

we did an excursion to evaluate the cost-effectiveness of canceling this planned program. By removing it, we would save \$3 billion, but we would end up losing about 20 percent more aircraft. That is clearly not a good move. The B-1 CMUP appears to be just as effective as procuring additional weapons. Our plans were well founded and this is something we will want to continue.

Chart 20 presents some sensitivities to scenario conditions. The upper most curve represents the baseline case, followed by a short warning case and then followed by a limited TACAIR case. The short warning case reduces the warning time to zero in both of the major regional contingencies. As a result, tactical aircraft arrive much later than under the base case. There is an overall increase in the number of aircraft lost for each of the bomber force options evaluated. This is the cost of not being able to recognize what an adversary is about to do. We make every reasonable effort to anticipate what our enemies are planning to do, but 100% knowledge of what another is planning is not possible. In this case, there is about a 35 percent increase in the number of aircraft lost. Retiring the B-1s actually has a larger detrimental effect under this reduced warning scenario. That is, one can see the slope of the line is changing and becoming a steeper.

The most severe scenario shown in chart 20 is the case where the employment of strike tactical aircraft was limited to loss of more than half of the tactical air sortie rate for the first week, and something like half the normal sortie rate for the next week as a result of attacks on bases. In this case, we incur further losses, about 60 percent more, than we had in the baseline. The same trend continues: retiring B-1s has a greater detrimental effect. Although none of these excursions are planned, they do point to the need for bombers as a prudent hedge against adverse scenarios.

The sensitivity analyses bounded the robustness of the bomber force options and the validity of assumptions. This effort was one of the unique strengths of the IDA

study--many contemporary bomber studies analyzed a base case scenario and conducted few or no excursions to test for changes in key assumptions.

## CONCLUSIONS

Mr. Chairman, I draw the following four conclusions (see chart 21):

- One, the planned force can meet the national security requirements of two nearly simultaneous major regional contingencies (MRCs) for anticipated scenarios and postulated excursions.
- Two, additional quantities of accurate guided munitions would be more cost effective than procuring 20 additional B-2s for the baseline two MRC conventional scenario and postulated excursions (further study is required to determine the quantity and best weapons mix).
- Three, the planned bomber force with accurate guided munitions provides a prudent hedge against excursions from the baseline scenario.
- Four, planned conventional upgrades to the B-1 are more cost effective than procuring an additional 20 B-2s for meeting the requirements of the two MRC scenario and postulated excursions.

The results of the bomber requirements study argue favorably and soundly for continuing the Department's initiatives to acquire modern conventional capabilities for the heavy bomber force (see chart 22). Those initiatives include continuing development and production of 20 B-2 aircraft, the B-1B conventional mission upgrade program, and the B-52H conventional mission enhancement program.

Because the bomber requirements study concludes that our planned forces with 20 B-2 aircraft are sufficient for the anticipated scenarios, I plan to re-evaluate the decision to allocate funds for preserving the B-2 production base. Those funds may be used more effectively by reallocating them to needed weapons, or bomber conventional upgrade programs. We will continue the ongoing bomber industrial base study, and I will not make any final decision on reallocating B-2 production base preservation funds until I receive the results of that study by July 1.

I plan to initiate a study to further evaluate both the quantity and mix of accurate guided weapons needed to meet the requirements of the two MRC scenario and reasonable excursions. We will evaluate the weapons requirement for the total planned force to successfully attack the anticipated target set and operating within the postulated threat environment.

## SUMMARY

In closing I would like to thank the Chairman, and members of the committee for this opportunity to convey the results of our recent Heavy Bomber Force Study and our plans for modernization our bomber force. I believe the heavy bomber force, although small in number, is one of the most highly leveraged force options in America's arsenal. We plan to vigorously pursue the necessary conventional upgrades to meet the challenging requirements of maintaining the peace and projecting our national will with military power when called upon to do so.